

# FACTS ABOUT FUEL - Storing Fuel for Maximum Shelf Life

(The following is the fourth in a series of articles exploring all facets of Model engine fuel. The writer is Don Nix, past owner of Powermaster, Inc. Reprinted by permission of POWERMASTER, Inc.)

During the Q&A part of countless "Dog & Pony Shows" at hobby clubs all over the U.S., one of the frequently asked questions is, "What's the shelf life of fuel?" The answer is both simple and easy: Properly stored, model engine fuel will last almost indefinitely. So, what constitutes "properly stored"? Let's take a look.

Contrary to many things you might have read or heard, just about the only thing that adversely affects model fuel is the absorption of moisture from the air. Keep the air away from it, and your fuel will likely be potent longer than you are! Methanol - the major ingredient in model fuel - is hygroscopic. This means it's virtually 100% soluble in water, and absorbs moisture from the air like a vacuum cleaner sucking up dirt.

Most modelers have no idea how rapidly this can - and does - happen, and tend to be rather skeptical about the idea. Let me paint a picture for you: Almost everyone has spilled a little fuel on the top of their fuel can in their flight box. If so, you've no doubt noticed that the shallow film of raw fuel takes on a cloudy, milky look. What you are seeing is the methanol sucking moisture right out of the air. Since the quantity of fuel is thin with a lot of surface area, the absorption is rapid, the water won't mix with the oil and the fuel turns cloudy. Just remember how quickly this happens... almost immediately.... and it might give you an idea of just how guickly your fuel can be ruined if you leave the cap off, allow a vent tube to remain open, etc. The wide surface area relative to the quantity of the fuel exposed is disproportionate, of course, to leaving the cap off the fuel jug, but I think you get the idea. In a humid condition such as exists in parts of the U.S., it doesn't take very long at all to adversely affect your fuel. And it doesn't take a large opening - a crossthreaded cap, a small vent line, etc. is all that's needed to do the damage. The solution is simple, of course. Just keep it tightly sealed. And yet, sometimes that's not enough. Most of us have seen small droplets condensed inside our fuel jugs after it's become partially empty. This is the result of condensation of moisture as

the air trapped inside the jug cools. Until about a year ago, there was little we could do about this, but there is now a method to take care of this problem. Since it's not the purpose of this column to commercially promote our own products, those interested are invited to contact the writer at the e-mail address above, and we'll be happy to tell you about the product that will solve the problem.

For the reasons above, it's our opinion that it is rarely a good idea to buy model fuel in 55-gallon drums. Unless all the fuel is poured up the first time the drum is opened, a

substantial volume of air is trapped inside the drum each time it's opened. Steel containers of any kind, warm and cool much more readily and rapidly than plastic, and condensation is much more evident in this type container. The result is that the last portion of the drum of fuel is quite likely to be contaminated with moisture, sometimes to the point of being unusable. There is another downside to buying fuel in drums, especially if more than one person is using it. With no control over the type container the fuel is dispensed into -perhaps not bearing sufficient or proper warnings, etc., the liability is incredibly high if an accident of any sort should occur. Model clubs considering this type of fuel purchase for their members should be particularly aware of the potential liability, which is huge!

While it's true that the UV in sunlight (or in fluorescent lights, for that matter) will cause pure nitromethane to deteriorate over time, it's our experience that once the nitro is in solution and substantially diluted, the deteriorative effect is relatively minor. To test this, some years ago we put a gallon of 10% fuel out in direct sunlight (in sunny Southern California) for a month. At the end of that time, we tested that fuel in an engine vs. fresh product and could see no difference. While it certainly won't hurt anything to store fuel away from direct sunlight, etc., it's our personal opinion that the adverse effect of sunlight on fuel under normal operating conditions is too little to worry about.

# Racing in the Sun

By: Mike Del Ponte

Wednesday, February 19<sup>th</sup>, Gino and I drove to Phoenix, Arizona for the first, of four, JR Gold Cup Quarter Midget Pylon races, held Feb 22 & 23. These planes are one of the nicest looking, and fastest Pylon racers in competition, with speeds of close to 200 MPH. We always get there a day or two early, to practice, and test new equipment. This time, Gino built a new Quarter Midget racer, so we had plenty of time for the maiden flight, and trim. Gino did a perfect job of building it, because it did not take even one click of trim, and looked beautiful. As usual for this time of year, the weather in Phoenix was perfect with clear skies, no wind, & 72 degrees. This is the biggest race of the season, with 60 entries, and the best pilots from all over the world like Italy, Japan, Australia, Canada, Mexico, etc. Last year, to every ones surprise, Gino won FIRST PLACE, at this race. This is unheard of for a 15 year old. His average competitor is 40. We were hoping for a repeat performance this year, as well. Saturday morning, the races started at 8:30 AM, and the competition was as tough as it could possibly be, with Dave Shadel of Performance Specialties, Richard Verano of YS Performance, Randy Bridge, & all the other hot dogs racing Gino today. At the end of five rounds on Saturday, Gino beat them all, and was the only contestant to finish the day, with a perfect

score. Sunday started of well, but on the second heat, Gino accidentally cut, & got a zero for the heat, even though, he was a half a lap ahead!!! I blamed it on not having enough rest the night before, with having only four hours of sleep. It takes split second reaction time to do the best, & being tired does not help. The rest of the day, he did excellent, & won all his heats Gino finished in second place, with Randy Bridge from Florida winning first place. Gino & I will be at the next JR Gold Cup in LA, in April, with a new racer design, & to take another crack at the first place spot.



### Presidents Corner...

Just the other day while waiting for nine of my friends to show up for the board meeting I was asked by a polite mother of two young children, what I was having a meeting for. "A board meeting for the Roque Eagles R/C Model Aircraft Club" I pronounced without the general enthusiasm I usually exude. "Wow, I saw those at lake Selmac last summer and they were great" she said. "I brought my children to look at the planes on the shore and must say", and here comes the reason for bringing this to you, "What a nice friendly, polite group it was". I was smiling so big, I was so proud of my club, and then I thought...hey, she's probably talking about the Grants Pass club. Naaaaaa!!!!!

You guys are great.

Your President, Kai V. Aiello

## 2003 Events Schedule...

**Puyallup Trade Show** February 1<sup>st</sup> & 2<sup>nd</sup>

**Ashland EAA Demo** Mav 18th

June 7th

OMPRA North-South Shootout

Wet & Windy Fun-Fly

Lee Renaud Memorial

August 23<sup>rd</sup> & 24<sup>th</sup>

March 23<sup>rd</sup>

Contest

Airshow Interest Day at Wal-Mart, Medford

**Grants Pass Swap-Meet** April 19th

Plat-I Float Fly June 21st & 22nd

Airshow Media Day

**Spring Fun-Fly Contest** April 26th

Military Fly-In Contest

September 3<sup>rd</sup>

August 30th

June 28th

Roque Eagles 2003 Airshow August 6<sup>th</sup> & 7<sup>th</sup>

Float Fly @ Lake Selmac May 10<sup>th</sup> & 11<sup>th</sup>

Selmac Float Fly July 26<sup>th</sup> & 27<sup>th</sup>

OMPRA Championship

**OMPRA Spring Pylon** Race May 17<sup>th</sup>

**OMPRA K. Falls Race** July 26<sup>th</sup>

Pylon Race October 4th

Kids Day @ Hawthorn Park

Fall Fun Fly October 18<sup>th</sup>

**Builders Contest** June 29th

August 2<sup>nd</sup>

## **2003 Board Members**

#### **Elected Club Officers**

#### President-

Kai V. Aiello - 245-9336

#### Vice President-

Bill Grove - 660-6581

#### Secretary-

Danny Watson - 488-2179

#### Treasure-

Werner Bruckner - 664-2549

#### **Board Members**

### Board Member at Large-

Mike DelPonte - 535-8800

Richard Schwegerl - 773-5479

#### **Public Relations Officer-**

Joe DeAscentis - 774-9519

#### **Newsletter Editor-**

Gino DelPonte - 535-8800

### **Events Coordinator-**

Bud Shirley - 664-2667

## **Appointed Positions**

#### Video Coordinator-

Eric Swenson - 245-3670

### Field Maintenance Supervisor-

Sam Arrigo - 597-4537

#### Field Marshall-

Rob Chambers - 245-0239

# Member Information...

This New Year we have had a bunch of new members come in to our club, and I would like to be the first to welcome them...

-Robert Chambers

-Billy Cropp

-Timothy Fredericy -Robert Mellecker

-Gary Lindsey -John McGonagle

-Eric Swenson

-Jim Morava

-Bobby Harris

-Jim Hassler

Welcome! to all of the new members.

-Forrest Carmichael -Joseph Hasler

Your Newsletter Editor, Gino Del Ponte

# Upcoming Newsletter...

The next newsletter will be featuring some information about Electric Park Flyers. I feel they are the most fun, inexpensive, & safest aircrafts you can have in your R/C collection...

> Your Newsletter Editor, Gino Del Ponte

Rogue Eagles R/C Club, P.O. Box 8332 Medford, Oregon 97504

Stamp

To:

Next Meeting is March the 11<sup>th</sup> at the Lions Sight and Hearing Center, 228 N. Holly, Medford, OR. Please bring your show and tells!

## For Sale

- Pilot Kit Lake Buccaneer 25 size... \$75
- Bredi Brown B2 Miss Los Angeles kit 60 size... \$150
- Goldberg Electra Glider Kit w/motor... \$50
- House of Balsa Pitts S2A 40 size... \$75
- Half A St w/TD .051... \$50

Call Richard Schwegerl 773-5478 aka FlynSquirrel

## **Membership Renewal**

Members may continue to update their membership status at the February meeting. Be sure to bring your dues of \$25.00. Also, you must be a current member of the AMA, so bring your 2003 AMA card for verification. Make checks out to the Rogue Eagles RC Club. Application forms will be available at the meeting. You may also renew by sending your dues, a copy of your 2003 AMA card and a \$25.00 check to the 2003 treasurer:

Werner Bruckner 925 North 5<sup>th</sup> St Central Point, OR 97502

Please renew your membership as soon as possible. You will not continue to receive a newsletter if you don't renew. Furthermore, your flying privileges at the field will stop without an up-to-date member ship.

The Board.